

NdeI-AvrII fragment from pMDLg/p, and the 3.09-kb AvrII-EcoRI fragment from pkat1Lg/p, Finer et al., supra.

Please replace the Abstract. A mark-up of the Abstract (including its heading) is shown below and a clean version of the Abstract (including its heading) on a separate page is provided in Appendix I.

ABSTRACT OF THE DISCLOSURE

~~The invention~~This disclosure provides a-lentiviral vectors containing an attachment incompetent fusogenic polypeptide and a heterologous targeting polypeptide. Also provided is a are lentiviral packaging constructs. ~~The construct contains a nucleic acid encoding trans-acting factors sufficient for lentiviral vector generation and an attachment incompetent fusogenic polypeptide. A, lentiviral packaging systems having at least two nucleic acid vectors is further provided. The lentiviral packaging system consists of a first nucleic acid vector comprising a packaging construct encoding a trans-acting factor for lentiviral vector generation, and a second nucleic acid vector encoding an attachment incompetent fusogenic polypeptide, said at least two vectors together encoding trans-acting factors sufficient for lentiviral vector generation. The invention additionally provides a~~and lentiviral gene delivery systems ~~having at least three nucleic acid vectors. The gene delivery system consists of: a first nucleic acid vector comprising a packaging construct encoding a trans-acting factor for lentiviral vector generation; a second nucleic acid vector comprising a fusogenic construct encoding an attachment incompetent fusogenic polypeptide, and a third nucleic acid vector comprising a lentiviral vector genome encoding lentiviral cis sequences sufficient for vector genome transduction, said at least three vectors together encoding trans-acting factors sufficient for lentiviral vector generation. Finally, methods of transducing a cell and methods of targeting a gene to a cell or tissue using the disclosed lentiviral vectors and systems of the invention~~ are also provided.